

Abstract

Background: Patients on maintenance hemodialysis typically show a Suboptimal immune response to hepatitis B (HB) virus vaccination compared to the non-uremic population. The aim of this study was to identify factors involved in the response to the vaccine in hemodialysis patients .

Methods: This study performed on 172 hemodialysis patients who were sero-negative for hepatitis B at Buali Hospital during 2015 in Ardabil , Iran. unvaccinated patients on maintenance haemodialysis were included in this study. Patients negative for HBsAg, Anti-HBc Ab and Anti-HCV were vaccinated with double dose (0 , 1 , 6 months) HB vaccine and Antibody response evaluated one month after third dose of vaccination by assessing the titre of antiHBs antibodies. Immune response was defined as sufficient when the antiHBs ab level was ≥ 100 mIU/ml, weak response when the antiHBs ab level was between < 100 mIU/ml \geq and 10 mIU/ml and insufficient when the antiHBs ab level was < 10 mIU/ml

Results: Of 172 patients , 98 were men and 74 were women .The average age of patients was 15.47 ± 61.19 years . An optimal immune response was achieved in 70 patients (40%) , whereas 34 patients (19.8%) were non-responders and 68 patients (39.5%) had weak response, There was a statistically significant negative correlation between the antiHBs ab titre and age ($r=-0.37$, $p=001$). In the present study, gender, BMI , diabet and smoking did not affect the response to hepatitis B vaccine.

Conclusion: In the present study, gender, BMI , diabet and smoking did not affect the response to hepatitis B vaccine.And response to vaccine significantly reduced with aging.

Key words: hemodialysis,hepatitis B, vaccine